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MYERS BIGEL SIBLEY & SAJOVEC, P.A.
P.O. BOX 37428
RALEIGH, NC 27627

EXAMINER
KEEFER, MICHAEL E

ART UNIT	PAPER NUMBER
2154	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/716,968	ANSCHUTZ ET AL.
	Examiner	Art Unit	
	MICHAEL E. KEEFER	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2007*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is responsive to the Amendment filed 10/16/2007.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 31-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding **claim 31**, which is directed to a computer program product comprising a computer readable medium, the "computer readable medium," in accordance with Applicant's specification, may be carrier waves. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. Instead, it includes a form of energy. Energy does not fall within a statutory category since it is clearly not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

In addition, the "computer readable medium" may merely be a piece of paper with computer code printed upon it as stated in Applicant's disclosure. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. Instead, it

includes functional descriptive material. Functional descriptive material does not fall within a statutory category since it is clearly not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

Claims 32-40, which depend from claim 31 do not correct the deficiencies of claim 31 and thus are rejected for the same.

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4.   Claims 1-5, 10-15, 20-25, 31-35, and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over DSL Forum "DSL Evolution - Architecture Requirements for the Support of QoS-Enabled IP Services" (WT-081, Rev4, December 2002), hereafter DSL Forum in view of Faccin et al. (US 2001/0049790), hereafter Faccin.

Regarding **claims 1, 11, 21, and 31**, DSL Forum discloses:

A method of managing Quality of Service (QoS) and/or bandwidth allocation in a Regional/Access Network (RAN) having a broadband access server   (BRAS) that facilitates differentiated end-to-end data transport between a Network   Service Provider (NSP) and/or an Application Service Provider (ASP), and a   Customer Premises Network (CPN) that includes a Routing Gateway

(RG), comprising: (Fig. 19 discloses this network architecture, as well as the Figure at the bottom of page 28)

receiving at the RAN, a modify QoS and/or bandwidth allocation message including updated QoS and/or bandwidth information from the NSP and/or ASP; (page 30, "Applications … request service or resources of the RAN…")

updating the BRAS with the QoS and/or bandwidth information (page 3` discloses that the BRAS maps reservation requests into Diffserv PHBs.); and sending updated QoS and/or bandwidth information to the RG. (Page 3` discloses that the CPE (aka RG) accepts policy information regarding how to manage resources from an external entity (i.e. the BRAS))

DSL Forum discloses all the limitations of claims 1, 11, 21, and 31 except for the quality of service request being an Application layer message.

The general concept of using application layer messages for Quality of Service requests is well known in the art as taught by Faccin. (See [0011] which teaches the use of Application layer messages for the reservation of resources)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine DSL Forum and Faccin in order to facilitate different types of connectivity of a subscriber.

Regarding **claims 2, 12, 22, and 32 and as applied to claims 1, 11, 21, and 31**, DSL Forum discloses:

The bandwidth allocation message includes information for a point-to-point session. (Page 30 discloses the use of RSVP, which is a point-to-point reservation protocol.)

Regarding **claims 3, 13, 23, and 33 and as applied to claims 1, 11, 21, and 31,** DSL Forum discloses:

The bandwidth allocation message includes information for an application flow. (Page 30 discloses the use of RSVP, which is a used to reserve resources for an application flow.)

Regarding **claims 4, 14, 24, and 34 and as applied to claims 1, 11, 21, and 31,** DSL Forum discloses:

An acknowledgement that resources were successfully reserved. (Page 30 discloses the use of RSVP which inherently has an acknowledgement indicating that the reservation was successful.)

Regarding **claims 5, 15, 25, and 35 and as applied to claims 1, 11, 21, and 31,** DSL Forum discloses:

wherein the RAN further includes an Application Network Interface (ANI) protocol handler (note the black lines labeled "A10-ASP" and "A10-NSP" in Fig. 20)

, a DSL Service Manager (Policy Server, fig. 20), and a   User Network Interface (UNI) protocol handler (Vertical line "U", Fig. 20); and

wherein receiving at the RAN, a modify QoS and/or bandwidth allocation message including updated QoS and/or bandwidth information from the NSP and/or ASP comprises

receiving at the ANI protocol handler an update application flow control information

message and/or a change session bandwidth request from the ASP. (An ANI in the

network path between the NSP/ASP is disclosed in Figure 20, note the black lines

labeled "A10-ASP" and "A10-NSP")

Regarding **claims 10, 20, and 40 and as applied to claims 5, 15, 35, 1,**

11, and 31, DSL Forum discloses:

The bandwidth allocation message includes information for a point-to-point session.

(Page 30 discloses the use of RSVP, which is a point-to-point reservation protocol.)

5.   Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Chawia et al. (US 6876668), hereafter Chawia in view of Applicant's Admitted Prior Art

(Fig. 4) further in view of Faccin.

Regarding **claims 1, 11, 21, and 31,** Chawia discloses:

receiving at the RAN, a modify QoS and/or bandwidth allocation message

including updated QoS and/or bandwidth information from the NSP and/or ASP;

(Col. 13 lines 11-30 disclose sending a request for a modification in bandwidth)

updating the BRAS with the QoS and/or bandwidth information (Col. 13

lines 31-50 disclose updating information within the network elements (i.e. a

BRAS as disclosed in Col. 11 lines 47-67); and

sending updated QoS and/or bandwidth information to the RG. (Col. 13 lines 31-50

disclose that the request for increased bandwidth is transmitted to each network

element in the path)

Regarding **claims 2, 12, 22, and 32,** Chawia discloses:

The bandwidth allocation message includes information for a point-to-point session.

(Chawia discloses the use of RSVP, which is a point-to-point reservation protocol.)

Regarding **claims 3, 13, 23, and 33,** Chawia discloses:

The bandwidth allocation message includes information for an application flow.

(Chawia discloses the use of RSVP, which is a used to reserve resources for an

application flow.)

Regarding **claims 4, 14, 24, and 34,** Chawia discloses:

An acknowledgement that resources were successfully reserved. (Chawia discloses

the use of RSVP which inherently has an acknowledgement indicating that the

reservation was successful.)

Regarding **claims 5, 15, 25, and 35**, Chawia discloses:

a DSL Service Manager (Network Policy Server 150 in Fig. 3)

Regarding **claims 6, 16, 26, and 36**, Chawia discloses:

Sending the update information to the DSL service manager, then the DSL service

manager sending the update information to the BRAS. (Col. 12 lines 35-40 disclose

the Network Policy server forwarding the update information to the network nodes

(i.e. BRAS))

Regarding **claims 7, 17, 27, and 37**, Chawia discloses:

The DSL service managed verfies authorization of the modification request and

updates a local respository with the information. (See Fig. 4, since the network policy

server can update the quality node's information itself, it must inherently verify that the bandwidth meets criteria, or else the system would fail to function, likewise, it is inherent that the policy server must also know the current amount of bandwidth that is currently being provisioned in order to know if it is safe to provision further bandwidth.)

Regarding **claims 9, 19, 29, and 39**, Chawia discloses:

receiving at the UNI protocol handler an acknowledgment of receipt of the QoS and/or bandwidth information by the RG; (sending acknowledgements of success in RSVP is inherent in the protocol.)

sending an acknowledgment from the UNI protocol handler to the DSL service manager responsive to receiving the acknowledgment of receipt at the UNI protocol handler; (sending acknowledgements of success in RSVP is inherent in the protocol.) and

sending a response message to the ASP from the DSL manager via the ANI protocol handler. (sending acknowledgements of success in RSVP is inherent in the protocol.)

Regarding **claims 10, 20, 30, and 40**, Chawia discloses:

wherein the QoS and/or bandwidth information comprises point-to-point protocol session QoS and/or bandwidth information. (Chawia discloses the use of RSVP, which is a point-to-point reservation protocol.)

Chawia does not specifically disclose:

a Regional/Access Network (RAN) having a broadband access server (BRAS) that facilitates differentiated end-to-end data transport between a Network Service Provider (NSP) and/or an Application Service Provider (ASP), and a Customer Premises Network (CPN) that includes a Routing Gateway (CPE)

and wherein the RAN further includes an Application Network Interface (ANI) protocol handler, and a User Network Interface (UNI) protocol handler;

receiving at the ANI protocol handler an update application flow control information message and/or a change session bandwidth request from the ASP.

Wherein sending bandwidth information to the RG comprises:

sending the QoS and/or bandwidth information from the DSL service manager to the UNI protocol handler; and sending the QoS and/or bandwidth information from the UNI protocol handler to the RG.

Applicant's Admitted Prior Art Teaches:

a Regional/Access Network (RAN) having a broadband access server (BRAS) that facilitates differentiated end-to-end data transport between a Network Service Provider (NSP) and/or an Application Service Provider (ASP), and a Customer Premises Network (CPN) that includes a Routing Gateway (CPE) (See Fig. 4)

and wherein the RAN further includes an Application Network Interface (ANI) protocol handler (Fig. 4, A10-NSP), and a User Network Interface (UNI) protocol handler (Fig. 4, "U");

receiving at the ANI protocol handler an update application flow control information message and/or a change session bandwidth request from the ASP. (An ANI in the network path between the NSP/ASP is disclosed in Figure 4, note the black lines labeled "A10-ASP" and "A10-NSP", therefore inherently the request going into the RAN must pass through the ANI)

Wherein sending bandwidth information to the RG comprises:

sending the QoS and/or bandwidth information from the DSL service manager to the UNI protocol handler; and sending the QoS and/or bandwidth information from the UNI protocol handler to the RG. (it is inherent in figure 4 that traffic moving from the Policy server through the BRAS to the CPE must go through the U protocol line)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Chawia with the teachings of Applicant's Admitted Prior Art in order to allow devices to perform bandwidth adjustments without disturbing the flow or sessions of data communication. (Col. 10, lines 63-64)

Chawia and AAPA teach all the limitations of claims 1, 11, 21, and 31 except for the quality of service reservation message being in the Application layer.

The general concept of using application layer messages for Quality of Service requests is well known in the art as taught by Faccin. (See [0011] which teaches the use of Application layer messages for the reservation of resources)

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Chawia and AAPA with Faccin in order to facilitate different types of

connectivity of a subscriber.

Response to Arguments

6.   Applicant's arguments with respect to claims 1-40 have been considered but are

moot in view of the new ground(s) of rejection.

The Examiner notes that in the prior art, the RAN does receive a message

independent of evaluation of the BRAS and RG, because the RAN is the first

element to receive the message, therefore it has not been evaluated by either the

BRAS or RG.

Regarding claim 4, the Examiner notes that the RAN will send an

acknowledgement to the NSP/ASP regardless of the evaluation of the BRAS or

RG to be able to fulfill the request, Therefore the action that an

acknowledgement, whether positive or negative, will be sent is independent of

any evaluation the BRAS or RG may or may not do.

Further, regarding the section 101 rejections, the Examiner agrees with the

citations of the MPEP in Applicant's arguments. However, Applicant ignores the

fact that the computer readable media that are recited in Applicant's specification

include non-statutory types of computer readable media (for example, carrier

waves and a piece of paper). Therefore the rejection is maintained. To overcome

this rejection, the Examiner suggests an amendment to the specification creating

a separate category of computer readable medium that only includes that which

is statutory, and an amendment to the claims using that category of computer
readable medium. An amendment to the specification merely deleting the non-
statutory subject matter will be interpreted as new matter by deletion. If applicant
would like clarification regarding this, the Applicant is invited to contact the
Examiner so that this rejection may be overcome.

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in
this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP
§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37
CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
the advisory action. In no event, however, will the statutory period for reply expire later
than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to MICHAEL E. KEEFER whose telephone number is
(571)270-1591. The examiner can normally be reached on Monday through Friday
9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MEK 7/5/2008

/Joseph E. Avellino/

Primary Examiner, Art Unit 2146